

1106-VD-2480      **Van Herd\*** ([herd@austin.utexas.edu](mailto:herd@austin.utexas.edu)), College of Undergraduate Studies, University of Texas at Austin, Austin, TX 78712. *Visual Representation in Undergraduate Mathematics Education: Lessons from the Pedagogy of the Sciences.*

Despite technological innovations, the epistemology and practice of undergraduate mathematics education remains unchallenged. Whether the instructor uses the blackboard, the iPad, or a variety of virtual configurations, teaching remains still very much the same as it was in the last century.

Using insights from the emerging field of neurocognition, the author suggests alternatives that he has used in innovating the undergraduate mathematics classroom. The focus of his attention will be a critical analysis of the rhetoric of the standard undergraduate university lecture and the corresponding visual representation of those ideas.

Using examples from his own successes with undergraduate mathematics students, ranging from honors to developmental, the author will present curricular examples as well as neurocognitively grounded examples that are widely used in undergraduate science education that mathematics instructors may wish to import in whole or in part into their undergraduate mathematics instructional sequence. (Received September 16, 2014)